



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

sn

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,048	12/31/2001	Adrian Crisan	200302266-1	2291

7590 02/23/2005

INTELLECTUAL PROPERTY ADMINISTRATION  
LEGAL DEPARTMENT M/S 35  
PO BOX 272400  
FT COLLINS, CO 80527-2400

EXAMINER

LABAZE, EDWYN

ART UNIT PAPER NUMBER

2876

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/039,048

Applicant(s)

CRISAN, ADRIAN

Examiner

EDWYN LABAZE

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 and 26-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 26-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Receipt is acknowledged of amendments filed on 1/31/2005.
2. Claims 1-15 and 26-41 (including new claims 38-41) are presented for examination.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-5, 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Otsuka (U.S. 6,563,923).

Re claims 1: Otsuka discloses portable telephone and character input method, which includes a key [as shown in fig. # 1] having a first data entry value associated with depressing a first portion [herein the position is described as one of the contact points 14 a-c, to which a data value is associated when depressing said contact position] of the key (col.4, lines 7+); the key

Art Unit: 2876

having a second data entry value [Otsuka discloses in fig. # 9 that each key {6f- 6m} has a first and a second data entry values associated with the key and that each entry value corresponds to a contact point 14a-14d shown in fig. # 1] associated with deflecting the key in a predetermined direction toward a second portion of the key different from the first portion (col.4, lines 10+); the key having a third data entry value associated with simultaneously depressing and deflecting the key in the predetermined direction to engage both the first and second portions [herein Otsuka discloses that each key has four data values associated four different contact positions respectively, and a fifth data value as a result of all four contact points being actuated at the same time] of the key (col.3, lines 26+; col.4, lines 55+; col.6, lines 31+); the key having a user readable indication of the first, second and third data entry values [as shown in fig. # 9], and where the key is adapted for being displaced by a human fingertip (although not disclosed, but inherently known in the art that depressing a key in a portable telephone keypad is adapted for being displaced by a human fingertip, or a pen and the like; as exemplified by the examiner in US reference 5,528,235 of Lin et al. {figs. # 4-5}).

Re claim 2: Otsuka teaches an apparatus and method, wherein the first data entry value is a numeric data value and the second and third data entry values comprise alphabetic data values (see fig. # 9).

Re claims 3-4, and 7: Otsuka discloses an apparatus and method, wherein the second and third data entry values are each associated with a predetermined zone [herein the zone is interpreted as the contact points 14a – 14d as shown in fig. # 1] around a periphery of the key and the number of zones is selectable (col.4, lines 7+).

Art Unit: 2876

Re claim 5: Otsuka teaches an apparatus and method, further comprising a controllable display 6a around the periphery of the key (col.5, lines 35+).

Re claim 8: Otsuka discloses an apparatus and method, wherein the key is a square in shape and the number of predetermined directions are four (see fig. #1).

5. Claims 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Krishnan (U.S. 6,377,685).

Re claims 30-31: Krishnan discloses cluster key management, a plurality of discrete data values (see figs. # 1-3); a plurality of keys each having a central portion [herein described as a primary portion of the key, i.e. 12 of fig. # 1] and a plurality of peripheral portions portion [herein described as a secondary portion of the key, i.e. 14 of fig. # 1], wherein each of the central and peripheral portions is displaceable to reference a different one of the plurality of discrete data values (col.14, lines 15+), and wherein the key is adapted for operation by a human fingertip (col.7, lines 1+; col.12, lines 40+); and user readable indications associated with the plurality of keys displayed in relation to the plurality of keys in positions relating to a QWERTY keyboard (col.24, lines 5-32).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2876

7. Claims 6, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka (U.S. 6,563,923) in view of Krishnan (U.S. 6,377,685).

The teachings of Otsuka have been discussed above.

Otsuka fails to teach a LCD display, and wherein the key is circular, or hexagonal, or octagonal in shape and the number of predetermined directions are four, six, or eight.

Krishnan discloses cluster key arrangement, which includes an LCD display 28 (col.12, lines 45+; col.15, lines 56+), having a key in a circular, or hexagonal, or octagonal shape and the number of predetermined directions are four, six, or eight (col.16, lines 37+).

In view of Krishnan's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ into the teachings of Otsuka an LCD display, which could be beneficial for touch screen display and preferably displaying the primary keys as white with black characters and the secondary keys in a particular color. Furthermore, the keypad with different shapes (i.e. square, circular, hexagonal, octagonal) would help reducing the size of device with less cursor keys by reprogramming the operating software of the device so as to allocate/group different data entry alphanumeric values to each section of the cursor key of the device. Moreover, such modification would have been an obvious extension as taught by Otsuka, therefore an obvious expedient.

8. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka (U.S. 6,563,923) in view of Krishnan (U.S. 6,377,685).

The teachings of Otsuka have been discussed above.

Otsuka fails to teach that the user readable indications having alphabetic characters arranged in positions relating to a QWERTY keyboard.

Art Unit: 2876

Krishnan discloses cluster key arrangement, which includes a plurality of the user readable indications having alphabetic characters arranged in positions relating to a QWERTY keyboard (col.24, lines 1-32).

In view of Krishnan's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ a Qwerty keypad into the teachings of Otsuka so as to maintain the conventional layout by separating the alphabetic data entry values to one side and the numeric data entry values on the other side of the keyboard. Furthermore, such modification would be beneficial to the user in helping reducing stress of the fingers and wherein multiple data entry values (i.e. alphabetic or numeric) could be programmed in one key on the keypad, help reduce the size of the apparatus with less data entry input modules, and user selectable without typing expertise. Moreover, such modification would have been an obvious extension of the teaching of Otsuka, therefore an obvious expedient.

9. Claims 26-29, 32-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka (U.S 6,563,923) in view of Krishnan (U.S. 6,377,685).

The teachings of Otsuka have been discussed above.

Otsuka fails to teach a multifunctional key having a central portion and wherein is of the central portion and peripheral portions is displaceable to reference a different one of the plurality of discrete data entry values.

Krishnan discloses cluster management, which a multifunctional key 12 [as shown in figs. # 1-4; 6A-7; 9] having a central portion [herein disclosed as the primary key 12/112/121] and wherein is of the central portion and peripheral portions [herein disclosed as the secondary keys 34/36/38/40; 104; 156] is displaceable to reference a different one of the plurality of

Art Unit: 2876

discrete data entry values (col.19, lines 30-67; col.20, lines 1-15), a QWERTY keyboard (col.24, lines 1-32).

In view of Krishnan's teachings, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ a multifunctional key having a central portion and wherein is of the central portion and peripheral portions is displaceable to reference a different one of the plurality of discrete data entry values so as to separate the primary key from the secondary avoiding any possible erred input entry. Furthermore, such modification would clearly help the user inputting the correct data entry, wherein the primary key contact point is more exposed to the center of the key and cover a larger surface area, wherein the secondary keys are arranged to the outer periphery of the primary key. Moreover, such modification would have been an obvious extension as taught by Otsuka.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Strauch et al. (U.S. 5,861,823) discloses data entry device having multifunction keys.

Burrell, IV (U.S. 6,232,892) teaches method of using a nine key alphanumeric binary keyboard combined with a three key binary control keyboard.

Ivanov (U.S. 6,633,277) discloses compact 3-state data entry device.

Luo (U.S. 6,757,388) teaches alphabetic telephone.

Bozorgui-Nesbat (U.S. 6,847,706) discloses method and apparatus for alphanumeric data entry using a keypad.



Art Unit: 2876

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWYN LABAZE whose telephone number is (571) 272-2395.

The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



el  
Edwyn Labaze  
Patent Examiner  
Art Unit 2876  
February 11, 2005

**THIEN M. LE**  
**PRIMARY EXAMINER**